RESEARCH SUMMARY

Nov. 1992 RS–005

forest sciences
NELSON FOREST REGION

Recent Publications by Staff Researchers

This is a list of publications completed by forest sciences researchers between January 1990 and October 1992. Lists will be published periodically. Copies of these publications are available from the Forest Sciences section in Nelson.

52 publications in six disciplines since 1990 – your guide to our areas of expertise.

ECOLOGY

Journal papers and technical reports:

Braumandl, T.F. 1992. Revised Ecological Field Guide now off the presses! B.C. Min. For., Nelson, B.C. Research Summary RS-004.

Ketcheson, M.V., **T.F. Braumandl**, D.Meidinger, G.F. Utzig, D.A. Demarchi, and B.M. Wikeem. 1991. Interior Cedar/Hemlock Zone. In D. Meidinger and J. Pojar (editors). Ecosystems of British Columbia. B.C. Min. For., Victoria, B.C.

Quesnel, H.J. 1990. Plant competition and the growth of western hemlock in the Eve River Watershed. Ph.D. thesis. Univ. Victoria, Victoria, B.C.

Quesnel, H.J. 1990. An investigation of poorly performing hemlock on prescribed burns in the CWHb1 variant. MacMillan Bloedel Ltd., Woodland Services Division, Nanaimo, B.C. MB project No. 314.4.

Land Management Handbooks:

Braumandl, T.F. and **M.P.Curran**. 1992. A field guide for site identification and interpretation for the Nelson Forest Region. B.C. Min. For., Victoria, B.C. Land Manage. Handb. No. 20.

GEOMORPHOLOGY

Journal papers and technical reports:

Jordan, P. and O. Slaymaker. 1991. Holocene sediment production in the Lillooet River Basin, B.C.: a sediment budget approach. Geographie physique et quaternaire, Vol. 45, pp. 45-57.

Conference and symposia papers:

Jordan, P. 1990. Debris flow and landslide contributions to the sediment budget of a Coast Mountains watershed. Canadian Assoc. of Geographers, 1990 Annual Meeting Programme, Edmonton, Alta., p. 132.

Jordan, P. 1990. Large debris flows in the Meager Creek volcanic complex, B.C. EOS Trans. Amer. Geopn. Union, Vol. 71, p. 1145. Paper presented at American Geophysical Union, Pacific Northwest Regional Meeting, Seattle, Wash., Sept. 13-14, 1990.

Jordan, P. 1991. Debris flows and their influence on the sediment budget regime of rivers in the Coast Mountains. *In* T.R. Yuzyk and B. Tassone (editors). Proc. of the B.C./Yukon Sediment Issues Workshop: April 24-26, 1990, Vancouver, B.C. Environ. Can., Inland Water Directorate, Water Resources Branch, Pacific/Yukon Region, Vancouver, B.C., pp. 44-46.

Jordan, P. 1991. Dynamic behaviour and material properties of debris flow in the southern Coast Mountains, British Columbia. Geological Assoc. of Canada – Mineralogical Assoc. of Canada, Annual Meeting, Vancouver B.C. 1990. Program with Abstracts, Vol. 15, p. A66.

HYDROLOGY

Journal papers and technical reports:

Gluns, D.R. 1990. Mathew Creek case study: evaluating the effects of wildfire on water quality for southeastern B.C., Canada. *In* R.Z. Callaham (editor). Wildland Resources Center, Univ. Cal., Berkeley, Cal. Report 22.

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Recent Staff Publications

Schmidt, R.A. and **D.R. Gluns.** 1991. Snowfall interception on branches of three conifer species. Can. J. For. Res. 21:1262-1269.

Toews, D.A.A. and **M.P.Curran.** 1992. A review of planning procedures and water protection issues for Ringrose slope. In-house consulting report. B.C. Min. For., Nelson, B.C.

Conference and symposia papers:

Gluns, D.R. and G. Rose. 1992. An improved carrying case for snow tubes. Paper presented at the Western Snow Conf., Jackson, Wy., USA. April 13-16, 1992.

Toews, D.A.A. 1991. Climatic and hydrological circumstances antecedent to mass wasting events in southeastern British Columbia. Proc. Western Snow Conf. Juneau, Alaska, 59-91-102.

Toews, D.A.A. 1991. The impacts of timber harvesting on sediment loads in the interior of B.C. *In* T.R. Wyzyk and B.L. Tasson, (editors) 1990. B.C./Yukon Sediment Issues Workshop: April 24-26, 1990, Vancouver, B.C. Environ. Can., Inland Waters Directorate, Water Resources Branch, Pacific/Yukon Region, Vancouver, B.C., pp. 77-80.

Toews, D.A.A. 1991. Off-site impacts of timber harvest and site preparation. *In* Soil disturbance guidelines: productivity and administrative implications. Proc. Soil Disturbance Workshop, Penticton, B.C., pp. 19-20.

PEDOLOGY

Journal papers and technical reports:

Curran, M.P., B. Chow, **D.A.A. Toews**, and D. Boyer. 1990. Landslide study: Cape Horn Bluffs area. B.C. Min. For., Nelson, B.C. Tech. Report.

Davis, G.P., S. Krannitz, and M. Goldstein. 1992. A reconnaissance study of road side tree injury and decline at 17 sites in the Interior of B.C. for the Road Side Tree Committee. Consulting report. Soilcon Laboratory, Vancouver, B.C.

Johnston, M., Y. Wand, and **M.P. Curran.** 1990. An Expert System to support prescribed burning decisions. Forest Economic and Policy Analysis unit, Vancouver, B.C. Working paper 141.

Johnston, M., Y. Wand, and **M.P. Curran.** 1992. An Expert System to support site preparation decisions related to reforestation. Revised (reviewed) manuscript submitted to INFOR.

Thompson, S.R., G.F. Utzig, and **M.P.Curran.** 1990. Growth of juvenile Engelmann spruce on skidroads: ESSF Nelson Forest Region. B.C. Min. For., Nelson, B.C. Research Summary RS-001. Also *In* Soil disturbance guidelines: productivity and administrative implications. Proc. Soil Disturbance Workshop, Penticton, B.C., pp. 69-70.

Conference and symposia papers:

Curran, M.P. and T.M. Ballard. 1990. Some slashburning effects on soils and trees in British Columbia. *In* S.P. Gessel, D.S. Lacate, G.F. Weetman, and R.F. Powers (editors). Sustained productivity of forest soils. Proc. 7th annual North American Forest Soils Conference, University of B.C., Fac. of For.,Vancouver,B.C., pp. 355-361.

Curran, M.P., M. Johnston, and Y.Wand. 1992. An Expert System to support site preparation decisions. Paper presented at B.C. Soil Science Workshop, Feb. 1991, and the Western Forestry Conf., Dec. 4, 1991. *In* Proc. FS2000 Applications of Information Systems to Forestry, May 15-16, Vancouver, B.C. Technol. Canada, Ottawa, Ont.

Land Management Handbooks/Field Guide Inserts:

Curran, M.P., B. Fraser, L. Bedford, M. Osberg, and B. Mitchell. 1990. Site preparation strategies to manage soil disturbance. B.C. Min. For., Victoria, B.C. Field Guide Insert No. 2.

Curran, M.P. and S.R. Thompson. 1991. Measuring soil disturbance following mechanical site preparation. B.C. Min. For., Nelson, B.C. Field Guide Insert. Working Draft.

Curran, M.P. and S.R. Thompson. 1991. Measuring soil disturbance following timber harvesting. B.C. Min. For., Victoria, B.C. Field Guide Insert No. 5.

Mitchell, B., **M.P. Curran**, and R. Newman. 1992. Site and soil data collection for sensitivity evaluation associated with pre-harvest silviculture prescriptions. B.C. Min. For., Nelson, B.C. Working Draft, Land Management Handbook No. 25.

Other interpretive tools:

Curran, M.P. and M. Johnston. 1992. SYTEPREP Expert System. Version .9d. B.C. Min. For., Nelson, B.C. Tech. Report. (Computer program for evaluating site preparation effects on growth limiting factors.)

Curran, M.P. and M. Johnston. 1991. Fire Effects Expert System (FIREFFEC) Ver. 1.2. B.C. Min. For., Nelson, B.C. Tech. Report. (Computer program, now part of SYTEPREP, above).

Johnston, M. and **M.P. Curran.** 1991. Fire Effects Expert System Users' Manual. B.C. Min. For., Nelson, B.C.

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Recent Staff Publications

Utzig, G.F., M. Johnston, and **M.P. Curran**. 1992. Soil attribute data manager (SADM). B.C. Min. For., Nelson, B.C. Tech. Report. (Computer program for soils/terrain mapping databases and interpretations, with or without GIS.)

FRDA Basic Forest Soils Workshop. Workbook, overheads, and instructor's notes developed primarily by G.F. Utzig, **M.P. Curran**, and M.J. Douglas.

SILVICULTURE

Journal papers and technical reports:

Coates, K.D., P.LePage and **J.C. Pollack**. 1990. The conversion of red alder dominated multistoried brush field to coniferous plantations. Western Expert Comm. on Weeds Res. Abstract. Vol. 3:199.

Crampton, D.C. 1992. West Arm Demonstration Forest Development Strategy. In-house publication. B.C. Min. For., Nelson, B.C.

DeLong, D.L. 1990. Trial of the Eden bedding plow in southern and central Alberta. Forest Engineering Research Institute of Canada, Vancouver, B.C. Tech. Note. TN-149.

DeLong, D.L., P.M. Osberg, C. Clarke, and W. Hays. 1990. Trial of the Tilth Winged subsoiler working on naturally compact soils in North Central B.C. Forest Engineering Research Institute of Canada, Vancouver, B.C. Tech. Note TN-146.

DeLong, D.L. 1991. Partial cutting prescriptions in southern British Columbia. Forest Engineering Research Institute of Canada, Vancouver, B.C. Interim Report.

DeLong, D.L. and **C.F. Thompson**. 1992. An efficacy trial of Velpar-L and a manual brushing treatment on thimbleberry and cottonwood. B.C. Min. For., Nelson, B.C. Tech. Report TR-001.

Forest Sciences Section. 1992. The West Arm Demonstration Forest. B.C. Min. For., Nelson, B.C. Research Summary RS-003.

Hedin, I.B. and **D.L. DeLong**. 1990. Short-term assessment of the Mitsui Miike cultivating attachment for excavators. Forest Engineering Research Institute of Canada, Vancouver, B.C. Tech. Note TN-151.

Johnstone, W.D. and **J.C. Pollack**. 1990. The influence of espacement on the growth and development of a lodgepole pine plantation. Can. J. For. Res. 20:1631-1639.

LePage, P., **J.C. Pollack**, and K.D. Coates. 1991. Chemical and manual control of thimbleberry (*Rubus parviflorus*) in northwestern B.C. West. J. Appl. For. 6(4):99-102.

Pollack, J.C. and P. LePage. 1990. Relative costs of red alder-to-conifer site conversion. B.C. Min. For., Victoria, B.C. FRDA Res. Memo No. 145.

Pollack, J.C., P. LePage, and F. van Thienen. 1990. Some effects of different forest herbicides on upland *Salix* spp. Can. J. For. Res. 20:1271-1276.

Pollack, J.C., F. van Thienen, and P. LePage. 1990. The influence of initial espacement on the growth of a 27-year-old spruce plantation. B.C. Min. For., Victoria, B.C. Res. Note No. 104.

Pollack, J.C., W. Johnstone, K.D. Coates and P. LePage. (in press). The influence of initial espacement on the growth of a 32-year-old white spruce plantation. B.C. Min. For., Victoria, B.C. Res. Note No. 111.

Thompson, C.F. 1992. Crop tree thinning of Western Larch in southeastern B.C. B.C. Min. For., Nelson, B.C. Research Summary RS-002.

Thompson, C.F. 1992. Crop tree thinning of Western Larch in southeastern British Columbia: 30-year results. B.C. Min. For., Victoria, B.C. Res. Note No. 110.

Thompson, C.F. 1992. Survival and early growth of seedlings planted on dry sites in the Kootenay River valley after site preparation. In-house publication. B.C. Min. For., Nelson, B.C.

OTHER CONTRACT REPORTS

Butt, G. and B. Bancroft. 1990. Natural regeneration under partially cut Douglas-fir and mixed conifer stands in the Nelson Region. Madrone Consultants Ltd., B.C. Min. For., Nelson, B.C. FRDA Report 3.66.

Radcliffe, G. and G. Porter. 1992. Biodiversity of the Nelson Forest Region. Madrone Consultants Ltd., B.C. Min. For., Nelson, B.C.

To order copies of these reports contact:

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